



Attorney Docket: 225.50216  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: TILMAN HAUG ET AL.

Serial No.: 09/912,451                      Group Art Unit: 1762 ✓

Filed: JULY 26, 2001                      Examiner: Pianalto, Bernard D.

Title: PROCESS FOR PRODUCING A SURFACE LAYER

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REPLY TO FINAL REJECTION UNDER 37 C.F.R. §1.116

**Mail Stop: AF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The following comments are addressed to the Final Rejection of August 6, 2003 and serve as a supplement to the Response filed on July 28, 2003.

Claims 1-8 and 17 have been rejected under 35 U.S.C. 102 as anticipated to the reference to Claussen et al. U.S. Patent No. 6,025,065 for the same reasons as indicated in the previous Patent Office Action of February 26, 2003. Likewise the rejection of claims 1-6 and 18-21 as unpatentable over the combination of Claussen et al. and Duffiedl' et al., Jin et al., and Clichè et al. is maintained for the same reasons as in the previous Office Action.

In response to the arguments filed on July 28, 2003, the Final Rejection indicates that claim 1 encompasses a process wherein a sintered porous ceramic

Furthermore, the features upon which Applicants relies "mixed and applied" are not, according to the Examiner, recited in the rejected claims.

Independent claims 1 and 17 provide a process which involves "applying a layer" and a second step involves introducing energy "during the application of the layer or as a result of a subsequent introduction of energy". Claims 1 and 17 also recite the production of a resultant surface layer having formed inter-metallic phases. It is also a part of each independent claim that the layer is applied to a "substrate".

The reference to Claussen et al. U.S. Patent No. 6,025,065 is directed to the formation of the ceramic body in which a green body is sintered. The resulting composites bodies are permeated by aluminides (intermetallic) compounds. The process for producing such bodies involves first the formation of powder-metallurgical formed green bodies and then the sintering in a non-oxidizing atmosphere wherein the green body consist of a mixture of fine powder of aluminum and one or more ceramic substances. During sintering, the aluminum reacts with the oxide and/or a metal to form the desired aluminide.

The green body cannot constitute a "layer" and furthermore, there is no showing of a substrate element. The claims specifically require applying a layer to a substrate element. The claim also requires that, either during the application of the layer or after the application of the layer, a reaction take place due to the application of heat.

Applicants submit that these process steps are not available from the reference to Claussen et al. It is not seen how a green body is compared to a layer and it is not seen how there is any "substrate element" involved with the green body. Furthermore the heating which takes place in the form of sintering in the Claussen et al. reference does not take place either while a layer is being put on a substrate element or after a layer is being put on a substrate element and in no event is the final product a "resultant surface layer".

The rejection under 35 U.S.C. 102 is based on the reference to Claussen et al. lines 1 to 25 and columns 6, lines 20-40. Applicants submit that the fabrication of the green body either by pressing, injection molding, slip casting, extrusion or other similar methods does not encompass the application of a layer to a substrate element and the heating of the layer during the application of the layer or after the application of the layer. The green body is not a resultant surface layer having formed inter-metallic phases. The inter-metallic phases, if any, in Claussen et al. apparently are only formed after sintering of the green body which again is not result of process of applying a layer to a substrate element.

Therefore, whether considering the green body as the final product for purposes of analyzes and comparison with claims 1 and 17 or whether the final sintered product is the complete product for comparing with claim 1, there is no showing of the process specifically defined by claims 1 and 17.

Therefore claims 1 and 17 define specific method steps, which are not anticipated by the reference to Claussen et al.

The rejection of claims 9-16 and 18-21 under 35 U.S.C. 103 as unpatentable over Claussen et al. in view of Duffield et al., Jin et al. and Clichè et al. is based on the showing of the secondary references with respect to various methods of heating. Even accepting the statement of the secondary references for the showing, they add nothing towards meeting the claim limitations of independent claims 1 and 17 from which they depend and contain all of the limitations thereof.

Therefore Applicants respectfully request reconsideration and allowance of this application containing claims 1-21 including independent process claims 1 and 17.

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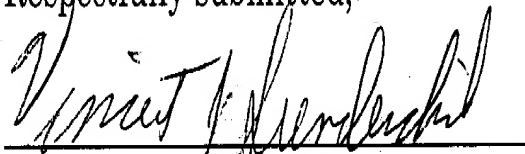
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If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #095309.50216US).

November 6, 2003

Respectfully submitted,



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